

and discuss the embryological features of the case at some length. Evidently there has been no median ventral diverticulum from the internal cloaca; the Müllerian ducts have remained separate, and have been drawn backward to the surface of the body, so that they have come to open separately on the surface of the cloaca before the time of differentiation of the external organs. Each Müllerian duct has then become separately differentiated into a vagina, uterus, and Fallopian tube. As a result of the lack of allantois, the pelvic girdle, although fully formed, has been arrested in development, and no symphysis pubis or mons veneris has been developed. No normal bladder has been produced, and the traction of the amnion, which must have enfolded the embryo and come in direct contact with the chorion and placenta, had favored separate connection of the Müllerian ducts with the external cloaca and the formation of bilateral bladders and urethra out of the ventral portion of the internal cloaca. The umbilical orifice has remained patent, and a pseudumbilicus has been formed by ligation of the body wall at the time of birth.

OPHTHALMOLOGY

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Fundus Changes in Leukemia.—HUDSON (*Royal London Ophthalmosp. Report*, September, 1911, p. 153) thus summarizes the present state of knowledge with regard to leukemia: Changes are met with in both lymphatic and myelogenous leukemia, and in both chronic and acute cases; they are, however, by no means constant, being found, according to Leber, in only one-third or one-quarter of all cases. Both eyes are almost always affected but not always in equal degree. The changes are in some cases limited to the appearance of scattered hemorrhages, while pre-retinal hemorrhage may also occur (Stock); in other cases, however, more characteristic features are present, consisting in a light yellowish hue of the whole eye ground; distension and tortuosity of the retinal vessels, affecting more especially the veins, which are of rose tint, while the blood stream in the arteries is abnormally pale; pallor and indistinctness of the optic disk, with a diffuse haze, involving the whole retina, and often more pronounced in the course of the main veins. The veins may be bordered by white bands, while hemorrhages are found scattered through the retina, together with white spots which, according to many authors, are more numerous in the periphery of the fundus, so that they may be invisible to ophthalmoscopic examination. Such spots are also met with in the macula; they are not infrequently surrounded by a red border, and

may exhibit a definite prominence. Movement of the blood stream in the veins has been observed ophthalmoscopically. It would seem that in the acute cases fundus changes of hemorrhagic and edematous origin tend to dominate the picture, while the more characteristic fundus changes have, for the most part, been observed in chronic cases.

Paralysis of the Accommodation after Diphtheria.—OLOFF (*Klin. Monatsbl. f. Augenheilk.*, May, 1912, p. 551) observed paralysis of the accommodation, complete in the left eye and nearly so in the right, four years after a mild attack of diphtheria in a healthy young subject. No paralyzes of other parts had been present. The pupillary action was preserved. Post-diphtheritic paralysis of the accommodation of six months duration and longer is extremely rare, perhaps not half a dozen cases are on record. Most authorities consider hypermetropia as a predisposing cause, in that it contributes to the strain of the weakened ciliary muscle during convalescence, which period is frequently spent in reading or other close work. Hypermetropia was not present in Oloff's case; in fact, one eye was emmetropic, and the other presented a low degree of simple myopic astigmatism. Opinions differ greatly as to the site of the lesion in this form of paralysis of the accommodation. Bumke, based upon the researches of Saenger and Wilbrand and of Nonne, thinks that the oculomotor nerve is at fault. Roemer and Stein locate the disturbance, as is the case in botulismus poison, in the small-celled median nucleus, the supposed centre of accommodation. They base their views upon the conclusions of Ehrlich regarding the poison of diphtheria. According to the latter authority, the bacillus elaborates two different substances; the one, the true toxin, causes the symptoms of diphtheria proper in the fauces, while with the other, the toxon, he succeeded in producing paralyzes experimentally. The action of the latter is much slower than that of the former. Roemer thinks that this view is supported by the relative inefficiency of the serum against paralyzes, the effect of which is directed against the toxin rather than the toxon. This accounts for the fact that paralysis of the accommodation is observed as frequently at present as before the administration of the serum.

PATHOLOGY AND BACTERIOLOGY

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Nematodes as a Factor in the Production of Cancer.—FIBIGER, of Copenhagen (*Berl. klin. Woch.*, February 17, 1913), shows some very interesting discoveries in the part played by nematodes in the causa-